WHAT IS CLAIMED IS:

1. A system for communicating between a first region having a first site and a second site, and a second region having a third site and a fourth site, the system comprising:

a first cable having two ends, the first end terminating at the first site and the second end terminating at the third site;

a second cable having two ends, the first end terminating at the second site and the second end terminating at the fourth site; and

a third cable having four ends, the first end terminating at the first site, the second end terminating at the third site, the third end terminating at the second site, and the fourth end terminating at the fourth site;

wherein the first and second cable each have a capacity of bandwidth X and the third cable has a capacity of at least bandwidth 2X.

2. The system of claim 1, wherein data is communicated in the third cable between the first site and the third site, and between the second site and the fourth site.

3. The system of claim 1, wherein the third cable is comprised of two cables of equal capacity.

4. The system of claim 1, further comprising at least one switching element located at each site for switching data traffic between the sites.

5. The system of claim 4, wherein the data traffic is classified into grades having different levels of priority.

6. The system of claim 5, wherein upon the failure of at least one cable the highest priority of the grades of data is switched by a switching element that is located at a site at which the data originates, from the failed cable to one of the other remaining cables, and is transmitted first, followed by successive lower priority grades of data and continuing until a total bandwidth of the remaining cables of the system is utilized.

7. A method of installing a system for communicating between a first region having a first site and a second site connected to each other, and a second region having a third site and a fourth site connected to each other, the method consisting of the steps of:

installing a first cable having a capacity of bandwidth X between the first site and third site;

installing a second cable having a capacity of bandwidth X between the second site and the fourth site; and

installing a third cable having a capacity of at least bandwidth 2X between the first site and the third site and the second site and the fourth site, wherein each site is connected to a bandwidth capacity of at least X.

8. The method of claim 7, wherein the first cable has two ends, the second cable has two ends, and the third cable has four ends.

9. A system for communicating data classified into a plurality of grades between a first region having a first and a second site, and a second region having a third and a fourth site, the system comprising:

a switching element located at each site, each switching element having at least three data ports for transmitting data to the other switching elements, each of a first and a second data port being multiplexed to at least two of the plurality of grades of data, and a third data port being multiplexed to the plurality of grades of data;

a first interconnecting cable being connected to the third data port of a first switching element located at the first site and the third data port of a second switching element located at the second site, and a second interconnecting cable being connected to the third data port of a third switching element located at the third site and the third data port of a fourth switching element located at the fourth site; and

a first cable and a second cable, each being of bandwidth X, the first cable being connected to one of the first and second data ports of the first switching element and one of the first and second data ports of the third switching element, the second cable being connected to one of the first and second data ports of the second switching element and one of the first and second data ports of the fourth switching element, and a third cable of at least bandwidth 2X and being connected to one of the first and second data ports of each switching element, each cable being distantly routed from each other cable.

10. The system of claim 9, wherein the classification of the grades of data is determined by a priority of the grades of data, a lower priority being preempted by a higher priority, the highest priority assigned to a grade of data never preempted and a lowest priority assigned to a grade of data preempted first.

11. In a system for communicating data classified into a plurality of grades between a first region having a first and a second site, and a second region having a third and a fourth site, the system having a first interconnecting cable being connected to the first site and to the second site, a second interconnecting cable being connected to the third site and to the fourth site, a first cable of bandwidth X being connected to the first site and the third site, a second cable of bandwidth X being connected to the second site and the fourth site, and a third cable of at least bandwidth 2X being connected to each of the sites, the improvement which comprises:

a switching element located at each site, each switching element having an input port for each of the plurality of grades of data, and at least three data ports for connecting to switching elements of other sites, a first and a second of the at least three data ports each being multiplexed to at least two of the plurality of grades of traffic, and a third of the at least three data ports being multiplexed to the plurality of grades of traffic.

12. A method of switching a plurality of grades of data in a communications network in the event of at least one data cable failure in the network, the communications network having a first region having a first site connected to a second site, and a second region having a third site

connected to a fourth site, each site having at least one switching element, each switching element having a plurality of input ports each being connected to one of the plurality of grades of data, and having at least three data ports for switching data to another of the switching elements, a first and a second data port of the at least three data ports being multiplexed to at least two of the plurality of grades of data and a third data port being multiplexed to the plurality of grades of data, a first cable of bandwidth X being connected to one of the first and second data ports of the first switching element and one of the first and second data ports of the third switching element, a second cable of bandwidth X being connected to one of the first and second data ports of the second switching element and one of the first and second data ports of the fourth switching element, and a third cable of at least bandwidth 2X being connected to one of the first and second data ports of the first and second switching elements and one of the first and second data ports of the third and fourth switching elements, each grade of data being assigned a priority, the method comprising the steps of:

determining that a cable failure has occurred in at least one of the cables; and

switching a higher priority grade of data from the failed cable to a cable not experiencing a failure by preempting a lower priority grade of traffic.

13. A method of switching a plurality of grades of data in a communications network in the event of at least one data cable failure in the network, the communications network having a first region having a first site connected to a second site, and a second region having a third site connected to a fourth site, each site having at least one switching element having at least three data ports for switching data to another of the switching elements, a first cable of bandwidth X

being connected to one of a first and a second data port of a first switching element and one of a first and a second data port of a third switching element, a second cable of bandwidth X being connected to one of a first and a second data port of a second switching element and one of a first and a second data port of a fourth switching element, and a third cable of at least bandwidth 2X being connected to one of the first and second data ports of the first and second switching elements and one of the first and second data ports of the third and fourth switching elements, the method comprising the steps of:

multiplexing by the switching elements the plurality of grades of data onto the data ports, with at least two of the plurality of grades of data being multiplexed to each first and second data port, and each grade of data being multiplexed onto each third data port;

assigning a priority to each grade of data;

determining that a cable failure has occurred in at least one of the cables; and

switching a higher priority grade of data from the failed cable to a cable not experiencing a failure by preempting a lower priority grade of traffic, wherein a highest priority of the grades of data is transmitted first, followed by successive lower priority grades of data and continuing until a total bandwidth of the remaining cables of the system is utilized.